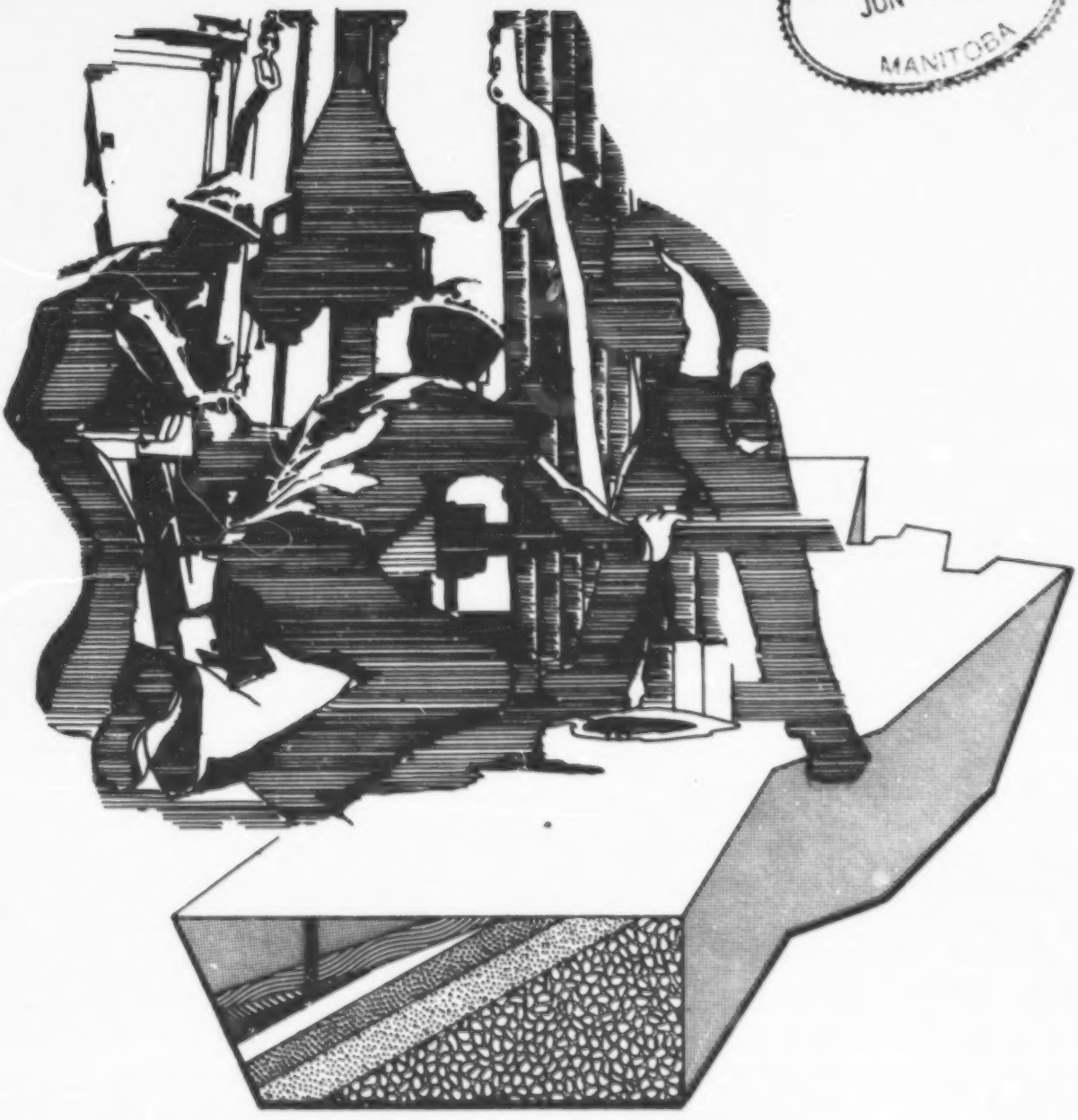
OIL ACTIVITY REVIEW 1984

L. B.

LEGISLATIVE LIBRARY
JUN 6 1985
MANITOBA



Manitoba
Energy and Mines
Petroleum

Manitoba Oil Activity Review

1984

March 1985

Manitoba
Energy & Mines
Petroleum

1984 Highlights

- During 1984, 246 wells were drilled in Manitoba, almost equalling 1983's total of 247 wells.

- Manitoba's annual oil production increased for the third consecutive year to 793 284 m^3 (5.0 million barrels), representing an 8% increase over 1983.

- The value of oil exceeded $169 million, an 11% increase over 1983, due mainly to increased production and relatively stable oil prices.

- Provincial revenues collected from the oil industry (royalties, oil taxes, lease sales, lease rentals and oil export taxes) increased to $22.5 million during 1984, representing a 4% increase over 1983 ($21.7 million).

- Gross royalties payable to freehold mineral owners were estimated at more than $18 million in 1984 (Federal and Provincial tax liabilities not excluded).

- Municipal tax assessments on oilfield equipment and pipelines were estimated at over $6.5 million.

- Oil industry expenditures in Manitoba were estimated to be $125 million in 1984, a 7% increase over 1983.

- Twenty-three geophysical seismic programs were licensed in 1984, covering 3 223 kilometres at an estimated cost of $4.0 million, an 11% increase over 1983 ($3.6 million).

- Two sales of Crown oil leases covering 8 776 hectares generated $2,208,639 in revenue to the province in 1984.

- The October 24, 1984 Crown lease sale generated a record average bonus price of $1,411 per hectare for a 128 hectare parcel located near the Lulu Lake Field. The parcel was purchased by the Whitewater Oil and Gas Corporation for a total bonus price of $180,630.

- Estimates of remaining recoverable crude oil reserves were calculated to be 8.02 million m^3 (50.5 million barrels) of oil as of December 31, 1984.

- As of December 31, 1984 there were 12 oil fields and 77 non-confidential oil pools designated in the province.

- Expansion of waterflood pressure maintenance schemes were approved and implemented in portions of the Waskada and Daly Fields during 1984.

- In February 1984, the Minister of Energy and Mines announced that the 90 km (15 cm diameter) crude oil pipe line from Waskada to Cromer Manitoba would be constructed and operated by Inter City Gas Corporation of Winnipeg.

- In March 1984, the Waskada Gas Plant began operations. The plant, the first of its kind in Manitoba, is designed to process a maximum of 85 000 m^3 of natural gas per day recovering natural gas liquids such as propane, butane and condensate.

- Omega Hydrocarbons received approval from The Oil and Natural Gas Conservation Board to re-inject dry processed gas (from the gas plant) back into the oil reservoir to aid in a gasflood pressure maintenance enhanced oil recovery project.

- In October 1984, Omega Hydrocarbons became a 30% joint venture partner in the Waskada pipe line with ICG retaining a 60% interest and the Manitoba Oil and Gas Corporation retaining a 10% interest.

- Construction of the Waskada pipe line commenced in October and was completed by December 31, 1984.

TABLE OF CONTENTS

	Page
1984 Highlights	i
Crown Oil and Natural Gas Lease Sales	1
Crown Oil and Natural Gas Leases	4
Freehold Mineral Owner's Leasing and Revenue	4
Geophysical Activity	5
Drilling Activity	8
Production	12
Oil Prices	17
Value of Production	17
Provincial Revenue from Oil Production	17
Municipal Tax Revenue	24
Surface Owners	24
Oil Price Supplement Programs	25
Manitoba Drilling Incentive Program	30
Oil Reserves	31
1985 Forecast	31

LIST OF TABLES

Oil Lease Sale Statistics (1979-84)	2
Geophysical Activity (1973-84)	6
Summary of 1984 Geophysical Programs	7
1984 Drilling Statistics by Operator and Contractor	9
Drilling Statistics (1951-84)	10
1984 Annual Production by Operator and Field	13
Production, Sales and Oil Prices (1951-84)	14
Provincial Revenue Statistics (1951-84)	22
NORP Program Statistics (1984)	27
SOOP Program Statistics (1984)	28
Crude Oil Reserves (1973-84)	32
Oil Field Statistics	35

LIST OF FIGURES

	Page
Crown Lease Sales (1951-84)	3
Wells Drilled in Manitoba (1951-84)	11
Annual Crude Oil Production (1951-84)	15
Monthly Crude Oil Production (1982-84)	16
Monthly Crude Oil Prices (1982-84)	18
Average Crude Oil Prices (1951-84)	19
Value of Monthly Oil Production (1982-84)	20
Value of Oil Production (1951-84)	21
Provincial Revenues from Oil Production (1951-84)	23
Value of NORP-SOOP Supplement Programs (1982-84)	29

Crown Oil and Natural Gas Lease Sales

Two Crown oil and natural gas lease sales were held in 1984. One hundred and four leases covering 8 776 hectares were sold for a total of $2,208,639.

In the first lease sale, held on May 9, 1984, the average bonus price paid per hectare was $198.53, whereas in the October 24, 1984 sale, the average bonus price increased by 45% to $286.92 per hectare. Compared with the two sales held in 1983, the average lease bonus price in 1984 increased by 123%, from $111.54 to $248.58/hectare.

The highest price in the May sale was $790.00 per hectare paid by Tri-Star Resources Ltd. and Beaverhead Resources Ltd. for an 80 hectare parcel in the Daly area. The highest price per hectare in the October sale was paid by Whitewater Oil and Gas Corporation ($1,411.17 per hectare) for a 128 hectare parcel located in the Lulu Lake area. Both sales had average prices which exceeded the levels set in 1983.

No exploration reservation were sold in 1984.

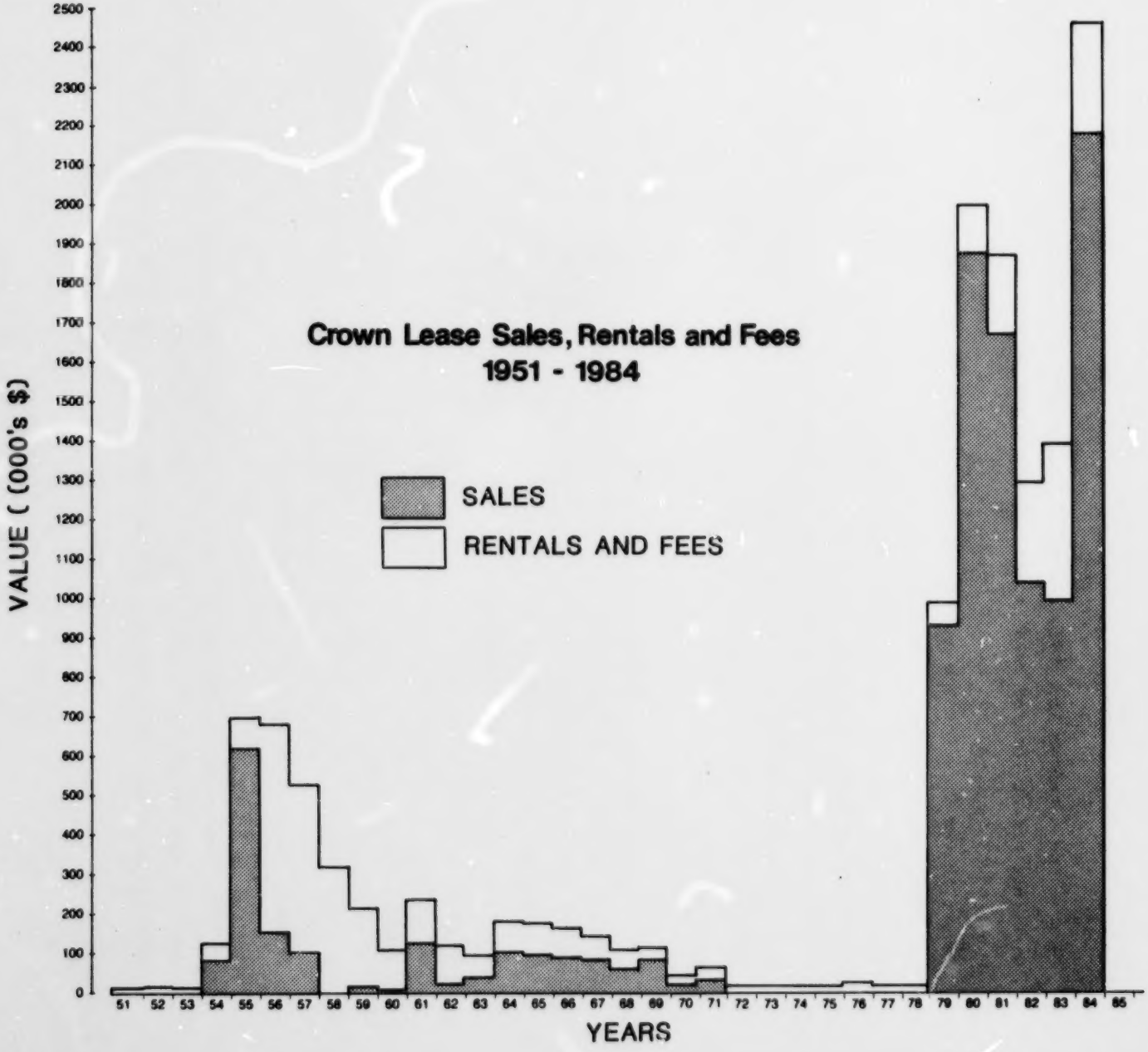
Since Crown oil and gas lease sales resumed in 1979, the province has received $9,025,433 in revenue from the disposition of Crown oil leases and exploration reservations. (refer to table for individual sale statistics).

MANITOBA OIL LEASE SALE STATISTICS

1979-1984

	LEASES						EXPLORATION RESERVATIONS						SALE
SALE DATE	NO. OF LEASES SOLD	AREA (ha)	BONUS ($)	AVG.PRICE ($/ha)	HIGHEST PRICE ($/ha)	LEASE REVENUE ($)	EXPL.RES. SOLD	AREA (ha)	BONUS ($)	AVG. PRICE ($/ha)	HIGHEST PRICE ($/ha)	RESERVATON REVENUE ($)	TOTAL REVENUE ($)
April 19, 1979	42	6 200	493,641.30	79.62	277.50	511,241.30	3	4 736	40,888.00	8.63	12.23	47,588.00	558,829.30
Sept. 6, 1979	44	4 864	404,243.60	83.11	315.17	419,103.60	-	-	-	-	-	-	419,103.60
March 5, 1980	38	6 204	426,553.50	68.75	267.34	443,963.50	6	19 408	746,463.20	56.53	100.31	764,468.20	1,208,431.70
July 23, 1980	18	2 432	224,698.82	92.39	139.75	231,678.82	2	2 368	73,882.00	31.20	31.20	77,342.00	309,020.82
Oct. 29, 1980	24	3 904	406,277.52	104.06	470.51	417,237.52	-	-	-	-	-	-	417,237.52
May 13, 1981	38	6 269	589,615.58	94.05	257.26	607,188.08	1	1 280	207,718.40	162.28	162.28	209,568.40	816,756.48
Oct. 28, 1981	47	6 043	485,342.76	80.31	252.50	502,800.26	4	4 096	403,480.32	98.51	178.43*	409,600.32	912,400.58
May 21, 1982	30	3 184	420,788.43	132.16	835.94	430,248.43	-	-	-	-	-	-	430,248.43
Oct. 27, 1982	26	3 264	634,879.52	194.51	938.88	644,339.52	-	-	-	-	-	-	644,339.52
May 11, 1983	34	4 043	593,209.24	146.73	762.34	605,016.74	1	1 024	40,192.00	39.25	39.25	41,722.00	646,738.74
Oct. 12, 1983	32	5 212	439,057.91	84.24	520.00	453,687.91	-	-	-	-	-	-	453,687.91
May 9, 1984	53	3 807	755,797.16	198.53	790.00	767,964.66	-	-	-	-	-	-	767,964.66
Oct. 24, 1984	51	4 969	1,425,701.50	286.92	1,411.17*	1,440,674.00	-	-	-	-	-	-	1,440,674.00
Total	477	54 195	7,299,806.61	134.69		7,475,144.34	17	32,192	1,512,623.90	45.96		1,550,288.92	9,025,433.26

*indicates current record


Crown Lease Sales, Rentals and Fees
1951 - 1984
SALES
RENTALS AND FEES
VALUE ((000's $)
YEARS
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85

Crown Oil and Natural Gas Leases

As of December 31, 1984, the total area of Crown oil and natural gas rights under disposition was 67 077 hectares. Of this total, 66 053 hectares were held under lease and 1 024 hectares were held under exploration reservations.

On December 31, 1982, deeper rights renewal provisions came into effect for pre-1979 leases. Under these provisions, non-productive areas and rights below the producing formation revert to the Crown at the end of the lease term. Up to December 31, 1984, these regulatory termination provisions resulted in leases covering 9 341 hectares being terminated. These cancelled rights again become available for leasing by other parties interested in actively developing them. A lease may be extended for further periods of one year if a rental penalty is paid and a commitment to a drilling program is made. In 1984, seven leases were extended.

Oil and natural gas leases have initial terms of five years. Because five years have passed since lease sales were resumed in 1979, 1984 was the first year that post-1978 lease holders had to surrender non-productive leases or apply for one-year extensions by paying additional rental penalties and committing to drilling programs. As a result, those leases surrendered will again be made available to other interested parties.

Freehold Mineral Owner's Leasing and Revenue

Approximately 80% of the mineral rights in southwestern Manitoba are privately owned (freehold). There is keen competition among companies to negotiate new leases with freehold

mineral owners in areas of current interest where leases have expired or where mineral rights are not presently leased. Freehold mineral owners receive revenue from signing bonuses, delay rental payments and oil royalties when production is obtained. Average freehold royalties may range from 12 1/2 to 17% of gross production sales value. It is estimated that gross royalties payable to freehold mineral owners in 1984 exceeded $18 million (before payment of provincial and federal taxes) and does not include signing bonuses and delay rental payments for new and non-producing leases.

Geophysical Activity

Twenty-three geophysical licenses were issued in 1984. The licensed programs covered approximately 3 225 km, making 1984 one of the most active years for geophysical exploration activity in the Province's history. The estimated cost of these programs was $4.0 million, representing an 11% increase over actual 1983 program costs.

The level of geophysical activity is generally indicative of expected exploratory drilling activity. If this holds true, it may be expected that drilling activity in 1985 will be similar to levels achieved in 1984.

In 1984, geophysical programs were carried out in the following areas of the province: Daly, Tilston, North Tilston, Whitewater, Waskada, Hartney, Oak Lake, Kirkella, Pierson, Mountainside, Virden, Souris, Napinka, Manson, Plum Lake, St. Lazare, Elkhorn, Lulu Lake, Deloraine, West Butler, McAuley, Hathaway, Regent and Deleau.

MANITOBA GEOPHYSICAL ACTIVITY SUMMARY

1973-1984

YEAR	LICENSES ISSUED	# OF KILOMETRES RUN (km)	TOTAL PROGRAM COSTS $
1973	0	0	0
1974	0	0	0
1975	1	270	106,500
1976	3	112	118,302
1977	2	830	1,046,220
1978	5	1 828	3,451,370
1979	10	2 001	2,970,734
1980	10	851	1,843,438
1981	11	1 148	2,116,854
1982	19	879	1,805,512
1983	14	3 410	3,639,692
1984	23	3 225*	4,000,000*

* Estimate

Summary of 1984 Geophysical Programs

Geophysical License No.	Licensee	Contractor	Km Licensed
217	Petty-Ray Geophysical Geosource Inc.	Petty-Ray Geophysical Geosource Inc.	771
218	Omega Hydrocarbons Ltd.	Northern Geophysical (1975) Ltd.	116
219	Andex Oil and Gas Ltd.	Regency Resources Ltd.	106
220	Peregrine Petroleum Ltd.	Quest Exploration Ltd.	10
221	Chevron Geoscience Co./ Petty-Ray Geophysical Inc.	Chevron Geoscience Co.	60
222	Cymric Resources Ltd.	Century Geophysical Corporation of Canada	39.7
223	New Scope Resources Ltd.	Century Geophysial Corporation of Canada	37.4
224	Pan Canadian Petroleum Limited	Sonics Exploration Ltd.	100
225	Westmin Resources Ltd.	Century Geophysial Corporation of Canada	31.4
226	Coho Resources Ltd.	Enertec Geophysical Services Limited	14.5
227	Saskoil Resources Inc.	Beaver Geophysical Services	132
228	Blackrock Energy Ltd.	Curzon Exploration Ltd.	378.3
229	Tundra Oil and Gas	Century Geophysical Corporation of Canada	38
230	Lasmo Exploration Ltd.	Beaver Geophysical Services	146
231	Beaverhead Resources Ltd.	Beaver Geophysical Services	14
232	Andex Oil and Gas Ltd.	Regency Resources Ltd.	18.5
233	New Scope Resources Ltd.	Century Geophysical Corporation of Canada	192
234	Gale Resources Ltd.	Gale Resources Ltd.	66
235	Petty-Ray Geophysical Geosource Inc.	Petty-Ray Geophysical, Geosource Inc.	609
236	Columbia Gas Development of Canada Ltd.	Sonics Exploration Ltd.	94
237	Tricentrol Oils Limited	Northern Geophysical (1975) Ltd.	185
238	Saskoil Resources Inc.	Format Resources Corp.	59
239	Westmin Resources Ltd.	Format Resources Corp.	4.8
TOTAL			3 222.6

Drilling Activity

In 1984, 31 different oil companies had wells drilled in Manitoba's oil patch, resulting in a 15% increase over the number of companies drilling wells in 1983. Nine drilling contractors with 17 drilling rigs drilled 246 wells, for a total depth of 220 631 metres. Drilling activity in 1984 equalled 1983 levels while surpassing 1982 levels by 26%. Of the total number of wells completed in 1984, 210 were classified as development wells, while the remaining 36 were exploratory.

The success rate of wells drilled was also very high. Eighty-nine percent (218 wells) of the 246 wells drilled were completed as potential oil wells. Three oil companies accounted for 54% of all wells drilled: Omega Hydrocarbons Limited (72 wells or 29%), Resman Holdings Ltd. (34 wells or 14%) and New Scope Resources Limited (26 wells or 11%).

For the fourth successive year much of the drilling activity in the province took place in the Waskada area, (41% or 100 wells). Sixty-four wells were completed in the Daly area while most of the remaining 82 wells were located in the Pierson, Virden, Tilston, Lulu Lake and Whitewater areas.

Several companies are continuing to show new or renewed interest in the Daly, Virden, Pierson, St. Lazare and Oak Lake areas of the province, which may stimulate more drilling activity in 1985.

1984 Drilling Statistics

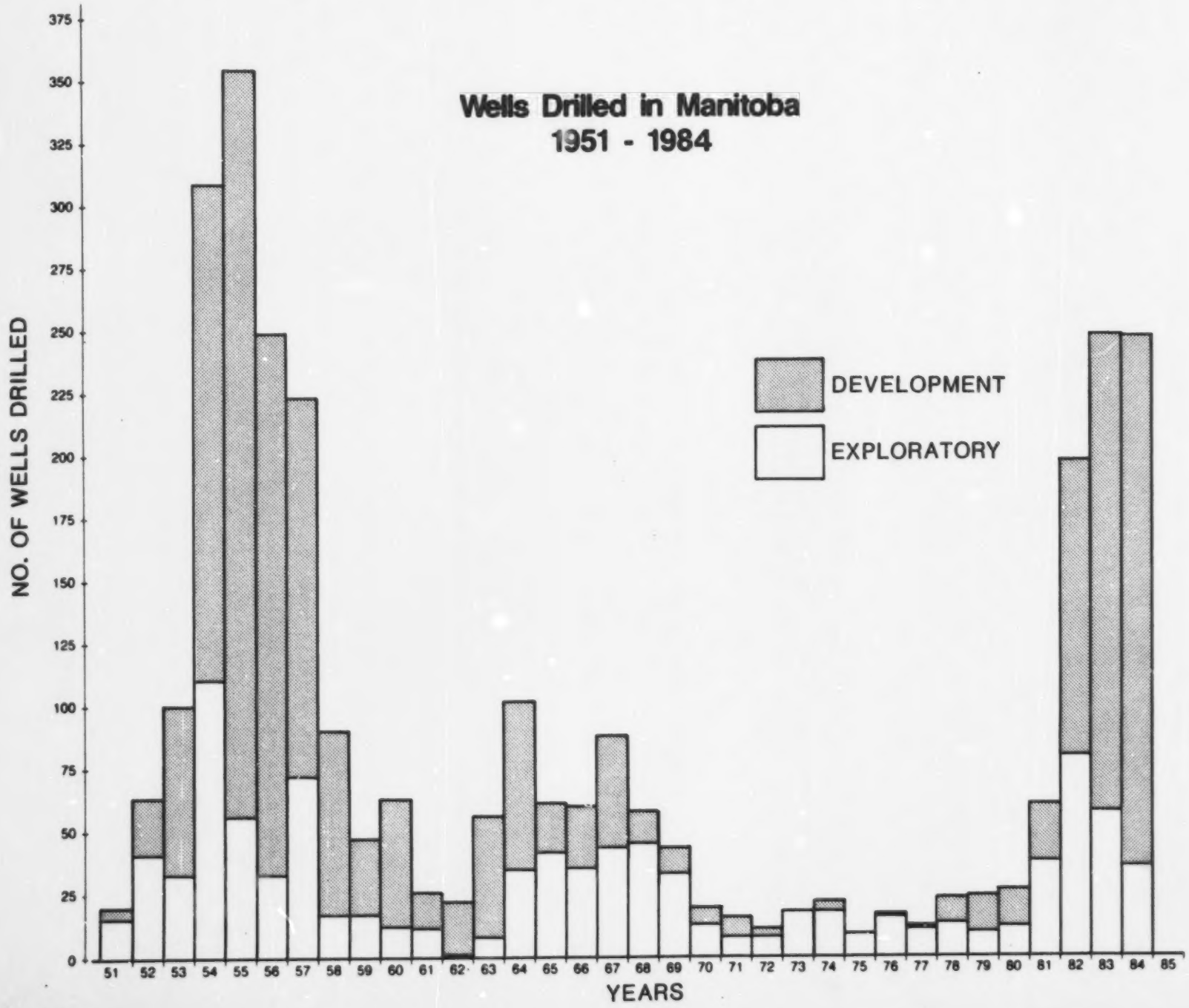
No of Wells Drilled by Operator	
Omega Hydrocarbons Ltd.	72
Resman Holdings Ltd.	34
New Scope Resources Ltd.	26
Beaverhead Resources Ltd.	16
Tundra Oil and Gas	13
Andex Oil and Gas Ltd.	8
Quest Energy Corporation	8
Petro Canada Inc.	7
Rideau Petroleums Ltd.	7
Canada Northwest Energy Ltd.	6
Wildmount Resources Ltd.	6
Chevron Canada Resources Ltd.	5
Columbian Gas Development of Canada Ltd.	5
Lyleton Coproration	4
Lasmo Exploration (Canada) Ltd.	3
Roxy Petroleum Ltd.	3
Sasko Oil and Gas Limited	3
American Eagle Petroleum Ltd.	2
Dome Petroleum Ltd.	2
Kinstar Resources Ltd.	2
Saskoil Resources Inc.	2
Troy Oils Ltd.	2
Voyager Petroleums Ltd.	2
A & B Resources Ltd.	1
Antler River Resources Ltd.	1
Ashlu Exploration Ltd.	1
Condor Petroleums Incoporated	1
Copperhead Oil Co., Ltd.	1
Corvair Oils Ltd.	1
ICG Resources Ltd.	1
KLM Ventures Ltd.	1
TOTAL	246

No of Wells Drilled by Contractor	
Red Arrow Drilling Ltd.	96
Crown Drilling Ltd.	73
Can Am Drilling Ltd.	45
Spartan Drilling Ltd.	11
Atco Drilling Ltd.	5
Concept Drilling Ltd.	5
Simmons Drilling Ltd.	5
Brimstone Drilling Ltd.	3
Custom Drilling Ltd.	3
TOTAL	246

DRILLING ACTIVITY 1951-1984

YEAR	OIL AND GAS WELLS								OTHER WELLS DRILLED			
	NO. OF WELLS LICENSED	NO. OF WELLS DRILLED	CLASSIFICATION OF WELLS DRILLED		COMPLETED STATUS		SERVICE	METRES DRILLED	STH	PTH	GSW	Helium
			E	D	POTENTIAL OIL	ABANDONED DRY						
1951	20	18	14	4	6	10	2	14 956	103	0	0	0
1952	74	68	40	28	25	33	10	58 344	33	0	0	0
1953	119	102	31	71	73	29	0	76 682	9	0	0	0
1954	340	310	114	196	217	90	3	233 170	0	0	0	0
1955	378	354	57	297	279	66	9	254 774	5	0	0	0
1956	269	248	30	218	202	38	8	176 994	14	0	0	0
1957	225	224	71	153	139	85	0	155 469	2	0	0	0
1958	92	92	16	76	61	31	0	60 430	0	0	0	0
1959	48	47	16	31	30	17	0	30 792	0	2	0	0
1960	65	66	12	54	50	15	1	43 918	0	0	0	0
1961	25	28	11	17	11	16	1	17 389	0	1	0	0
1962	28	24	3	21	15	9	0	17 683	0	0	0	2
1963	59	57	9	48	39	16	2	43 451	0	0	0	0
1964	107	104	32	72	68	35	1	75 303	0	3	0	0
1965	69	65	40	25	27	38	0	50 298	2	8	0	0
1966	68	63	33	30	29	33	1	54 863	5	4	0	0
1967	90	85	42	43	44	41	0	67 068	0	0	0	0
1968	61	59	44	15	27	32	0	48 840	2	0	1	0
1969	55	46	30	16	14	29	3	34 376	38	0	0	0
1970	17	18	13	5	2	16	0	16 253	1	0	0	0
1971	18	15	6	9	2	8	5	13 026	6	0	0	0
1972	10	9	6	3	0	7	2	6 778	1	0	0	0
1973	19	17	17	0	0	17	0	14 083	0	0	0	0
1974	21	21	17	4	6	14	1	22 710	1	0	0	0
1975	5	7	7	0	2	4	1	6 717	4	0	0	0
1976	14	14	13	1	3	11	1	11 161	0	0	2	0
1977	19	11	10	1	9	2	0	9 359	0	0	2	0
1978	16	22	12	10	10	6	6	18 329	0	0	0	0
1979	27	25	9	16	16	9	0	20 537	0	0	0	0
1980	27	27	12	15	18	9	0	23 508	0	6	0	0
1981	71	62	33	29	47	15	0	61 011	0	5	0	0
1982	201	195	78	117	164	30	0	184 291	0	0	0	0
1983	284	247	57	190	223	24	0	229 304	0	5	0	0
1984	249	246	36	210	218	28	0	220 631	0	0	0	0
TOTAL	3,190	2,996	971	2,025	2,076	863	57	2 372 498	226	34	5	2

E - Exploratory; D - development; Service - water supply, waste disposal, water injection wells;
STH - Structure test hole; GSW - gas storage well; PTH - potash test hole.
*"Other Wells Drilled" are not included in the Number of Wells Licensed, Number of Wells Drilled, or Metres Drilled columns.


Wells Drilled in Manitoba
1951 - 1984
NO. OF WELLS DRILLED
YEARS
DEVELOPMENT
EXPLORATORY
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85

The drilling and exploration activity away from Waskada indicates that interest from the successful Waskada oil play is spreading to other areas of the province.

Production

Annual oil production in Manitoba reached 793 284 m^3 (5 million barrels) in 1984, representing an 8% increase over 1983 and a 36% increase over 1982 production. For the third consecutive year since 1968, oil production has increased.

Oil production had been declining at approximately 3.5% per year from 1969 to 1981. The increased oil output since 1982 is attributed mainly to the successful development of the Waskada area.

Production from the Waskada area increased from 85 666 m^3 (540,000 barrels) in 1982 to 240 164 m^3 (1.5 million barrels) in 1983 and 270 156 m^3 (1.7 million barrels) in 1984. As of December 1984, the average daily production from this area is approximately 760 m^3 (4,800 barrels).

In 1984, 376 443 m^3 (47% of total production) was classified as "New" oil and of this total, approximately 72% was produced from the Waskada Field.

By December 1984 approximately 53% of the oil production in Manitoba was classified as "Old" oil whereas in 1983 "Old" oil accounted for 60% of total production. This decline in "Old" oil production, is expected to continue as more new oil is brought on production.

1984 Annual Production

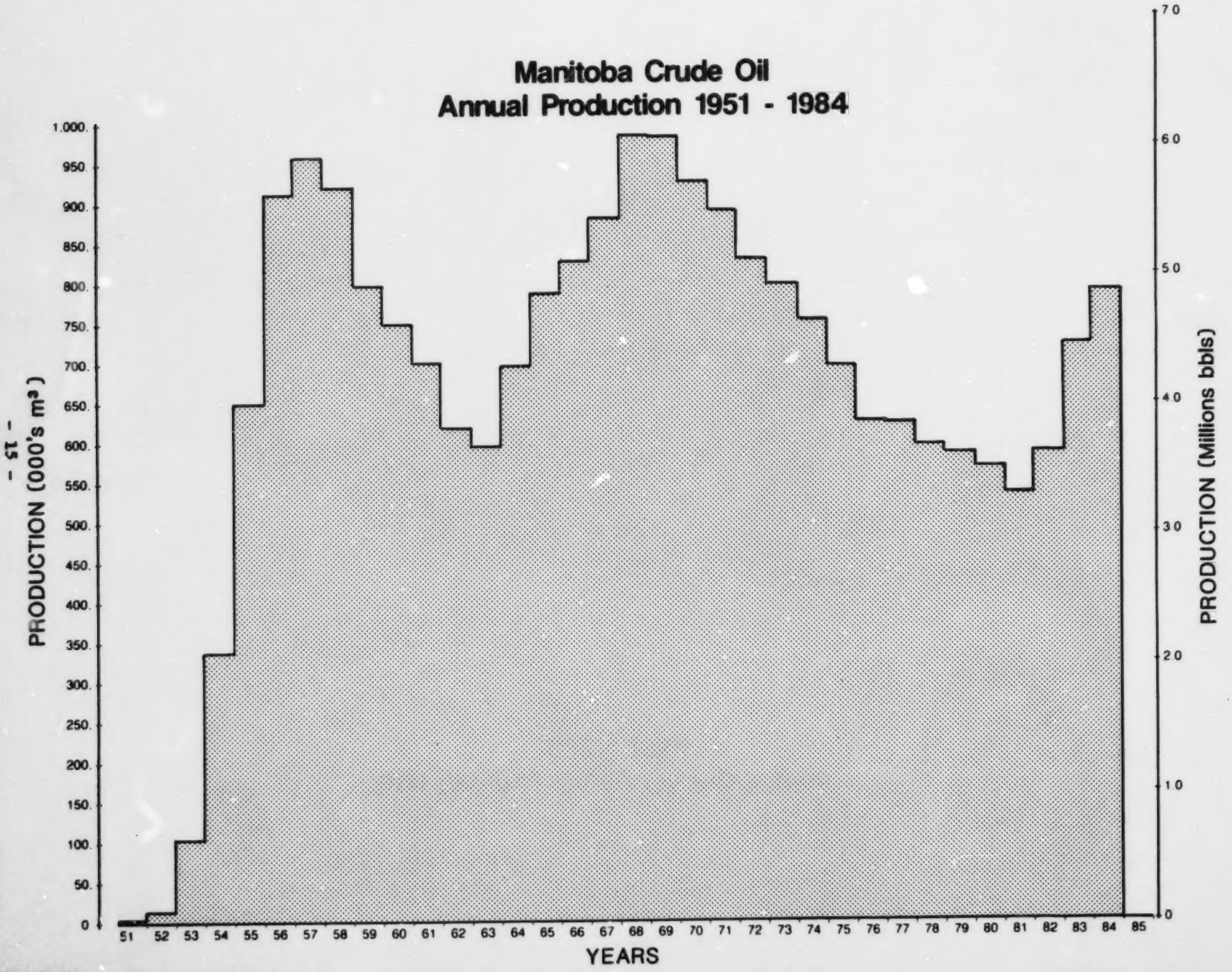
By Operator	Vol (m^3)
Chevron Canada Resources Ltd.	353 974.3
Omega Hydrocarbons Ltd.	213 663.9
New Scope Resources Ltd.	34 016.4
Roxy Petroleum Ltd.	22 260.0
Tundra Oil and Gas	21 054.8
Geocrude Energy Inc.	19 651.4
Samedan Oil of Canada Inc.	12 232.7
Resman Holdings Ltd.	11 751.8
Beaverhead Resources Ltd.	10 583.3
Rideau Petroleums Ltd.	9 354.0
ICG Resources Ltd.	8 580.6
Petro Canada Inc.	8 172.7
Mead Petroleum & Farms Ltd.	5 536.7
Cobra Oil and Gas Corporation	5 426.8
Resman Oil and Gas Ltd.	4 601.2
Canada Northwest Energy Limited	4 586.7
Murphy Oil Company Ltd.	4 488.2
TransCanada Resources Ltd.	4 225.6
Can-Tex Drilling & Exploration Ltd.	3 932.6
Andex Oil Co. Ltd.	3 736.6
Triton Petroleum Limited	3 567.6
Saskoil Resources Inc.	3 270.3
Canadian Reserve Oil & Gas Ltd.	2 794.5
Suncor Inc.	2 459.1
Sasko Oil and Gas Limited	2 399.7
Koch Exploration Canada Inc.	2 344.8
Texaco Exploration Canada Ltd.	1 852.6
Wildmount Resources Ltd.	1 748.5
Scurry-Rainbow Oil Limited	1 081.0
Teck Corporation Limited	1 026.6
Norcoul Resources Ltd.	1 017.7
Other	7 891.3
TOTAL	793 284.2

By Field	Vol (m^3)
Virden	356 897
Waskada	270 156
Daly	88 782
Pierson	19 423
Whitewater	14 271
Kirkella	12 435
Tilston	10 988
South Pierson	5 796
Souris Hartney	2 788
Lulu Lake	1 767
Coulter	758
West Butler	502
Other Areas	8 722
	793 285

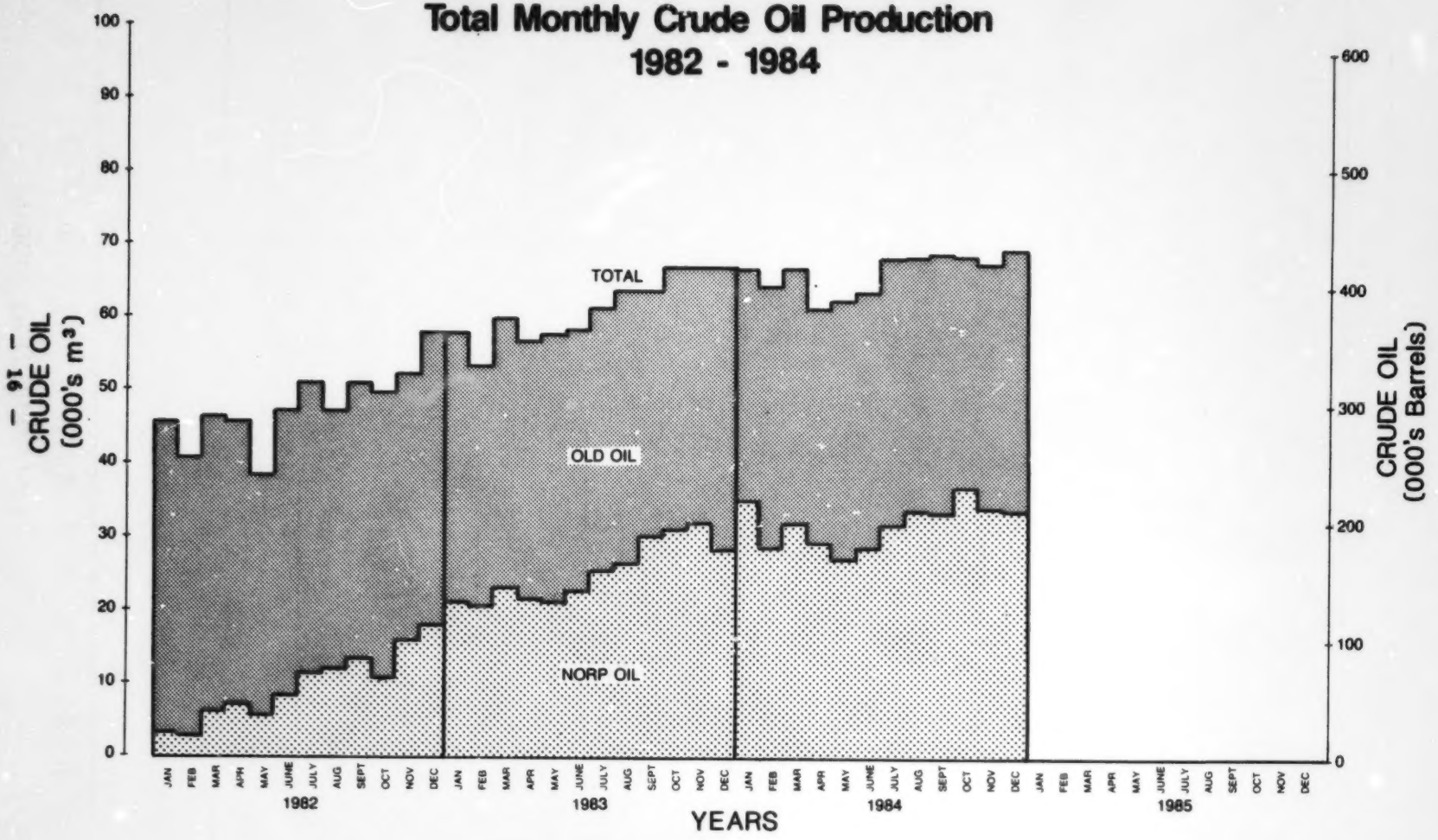
MANITOBA CRUDE OIL PRODUCTION AND SALES VALUE
1951-84

YEAR	ANNUAL PRODUCTION (m^3)	VALUE OF SALES (000's $)	CUMULATIVE PRODUCTION DEC. 31 (m^3)	CUMULATIVE VALUE OF SALES (m^3) (Dec. 31) (000's $)	AVERAGE WELLHEAD PRICE (m^3)
1951	1 854	25	1 854	25	15.88
1952	17 022	182	18 876	207	14.08
1953	104 193	1,658	123 069	1,865	16.54
1954	341 410	5,566	464 479	7,431	16.65
1955	658 802	9,517	1 123 281	16,948	14.56
1956	919 539	13,417	2 042 820	30,365	14.61
1957	967 721	15,231	3 010 541	45,596	15.81
1958	926 322	14,265	3 936 863	59,860	15.40
1959	803 461	11,615	4 740 324	71,475	14.46
1960	757 054	10,690	5 497 378	82,166	14.16
1961	711 813	10,133	6 833 180	92,299	14.26
1962	623 989	9,500	6 833 180	101,799	15.12
1963	599 276	9,183	7 432 456	110,982	15.33
1964	701 909	10,694	8 134 365	121,676	15.31
1965	786 050	12,270	8 920 415	133,946	15.59
1966	831 248	13,087	9 751 663	147,033	15.73
1967	887 572	13,974	10 639 235	161,007	15.77
1968	986 024	15,561	11 625 259	176,568	15.79
1969	985 981	15,615	12 611 240	192,183	15.82
1970	939 175	14,858	13 550 415	207,041	15.80
1971	890 622	15,445	14 441 037	222,486	17.31
1972	835 380	14,586	15 276 417	237,073	17.46
1973	807 882	17,155	16 084 299	254,228	21.23
1974	754 667	27,182	16 838 966	281,409	36.00
1975	701 459	31,453	17 540 425	312,862	44.81
1976	633 322	33,533	18 173 747	346,395	52.99
1977	630 466	40,457	18 804 213	386,852	64.12
1978	598 354	45,953	19 402 567	432,805	76.77
1979	583 377	48,403	19 985 944	481,208	82.96
1980	563 482	54,948	20 549 426	536,157	97.52
1981	542 695	64,055	21 092 121	600,211	118.03
1982	582 223	100,537	21 674 344	700,748	172.66
1983	736 934	152,350	22 411 278	853,098	207.53
1984	793 284	169,296	23 204 562	1,022,394	213.41

Manitoba Crude Oil
Annual Production 1951 - 1984



Total Monthly Crude Oil Production
1982 - 1984



Oil Prices

The price of "New" oil (D2S3 quality block) in January, 1984 was $\$245.34/m^3$ ($38.99 per barrel). "New" oil prices narrowly fluctuated throughout 1984 reaching a yearly high in August of $\$261.82/m^3$ ($41.63 per barrel). "New" oil prices ended the year at $\$255.71/m^3$ ($40.66 per barrel).

Compared with 1983, "Old" oil prices remained virtually unchanged. On January 1st, 1984, the selling price of "Old" oil (D3S4 quality block) was $\$185.11/m^3$ ($29.43 per barrel) compared to $\$184.65/m^3$ ($29.34 per barrel) in January 1983. By December 1984, "Old" oil prices had closed the year off at $\$185.18/m^3$ ($29.45 per barrel).

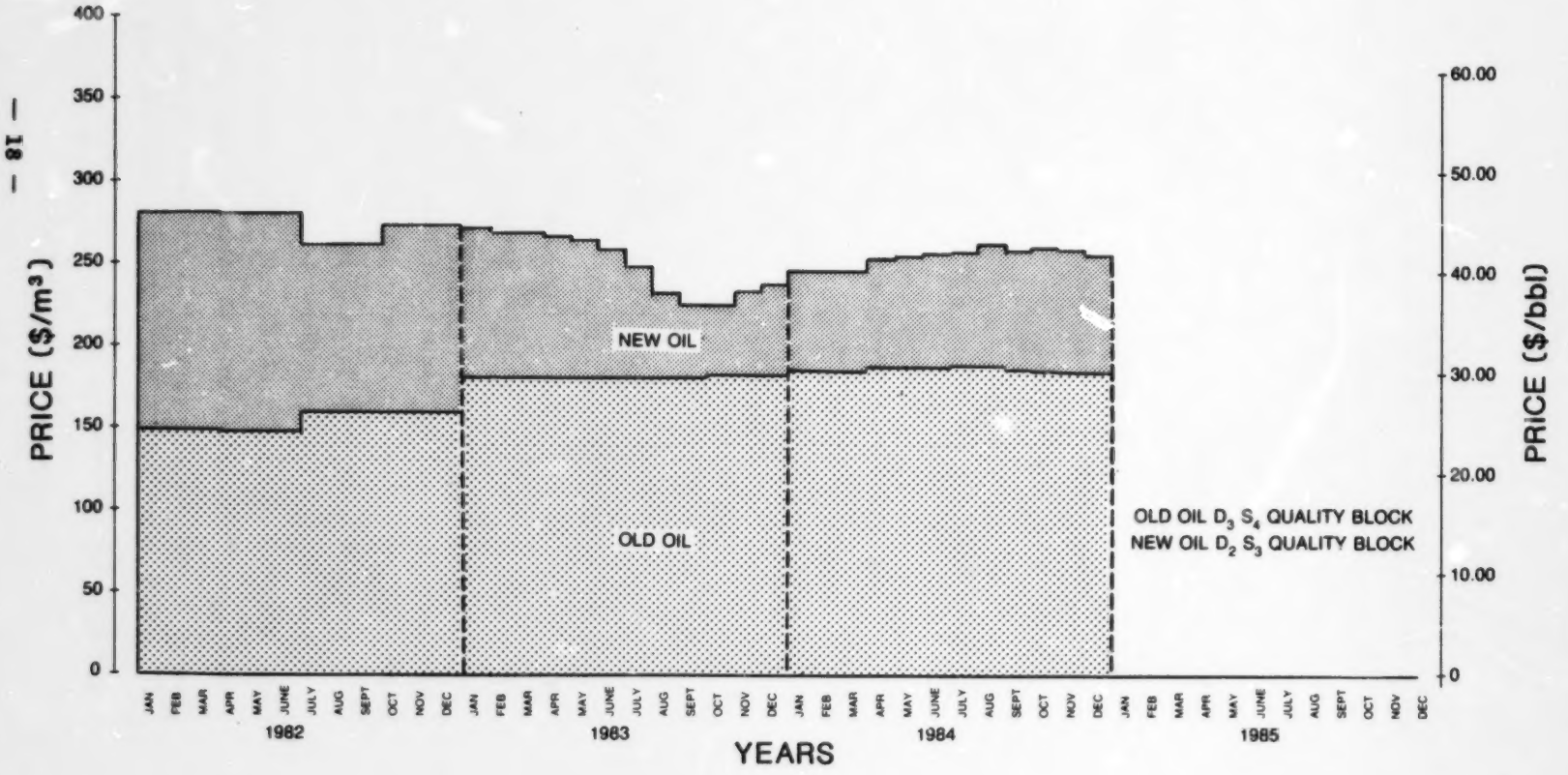
Value of Production

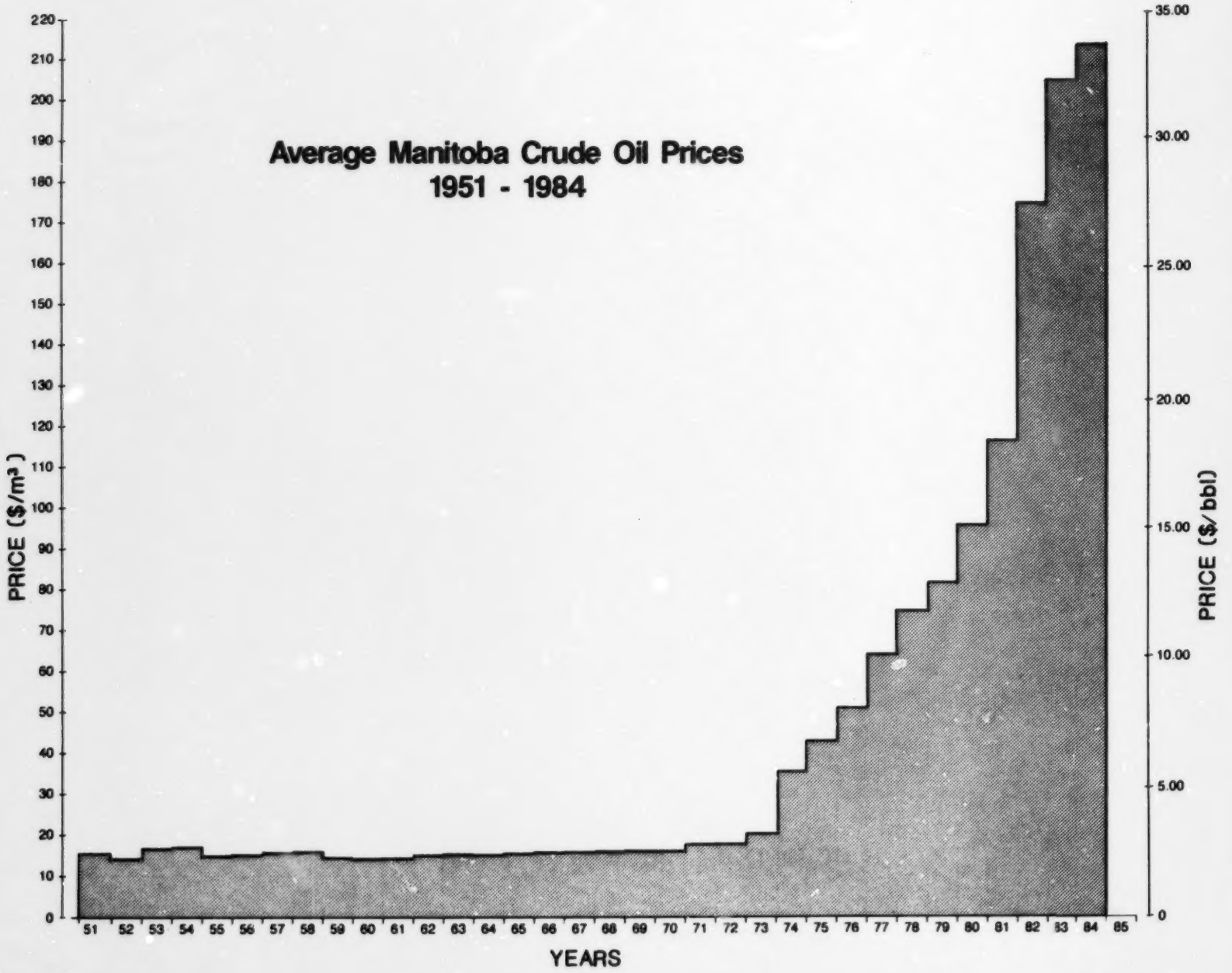
The total value of oil production during 1984 was $169.3 million, resulting in an 11% increase over 1983 production and a 68% increase over production in 1982. The main reasons for the increase were the increased production levels and relatively stable oil prices.

Provincial Revenue from Oil Production

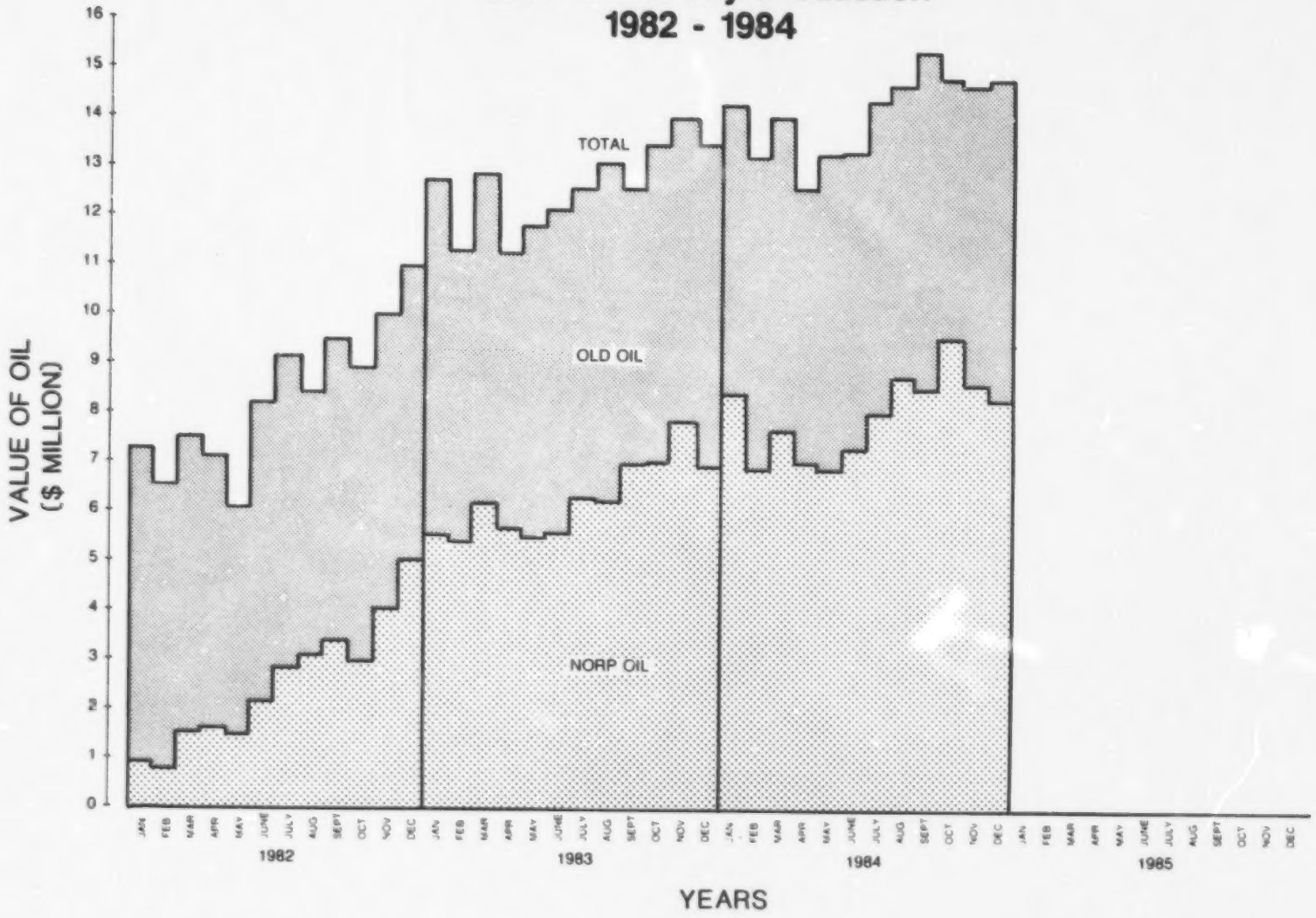
For a third consecutive year, Provincial government revenues from oil production increased due to higher production levels, lease sales and higher wellhead prices. The Manitoba government collected approximately $22.5 million in revenues ($4.0 million in Crown oil royalties, $15.6 million in freehold oil taxes, $2.5 million in Crown lease sale bonuses, rentals and fees, and $0.4 million in the province's share of crude oil export taxes) resulting in a 4% increase over 1983. These figures do not include provincial revenues in the form of corporate capital tax, sales tax, municipal tax and corporate and individual income tax.

Manitoba Crude Oil Prices
1982 - 1984

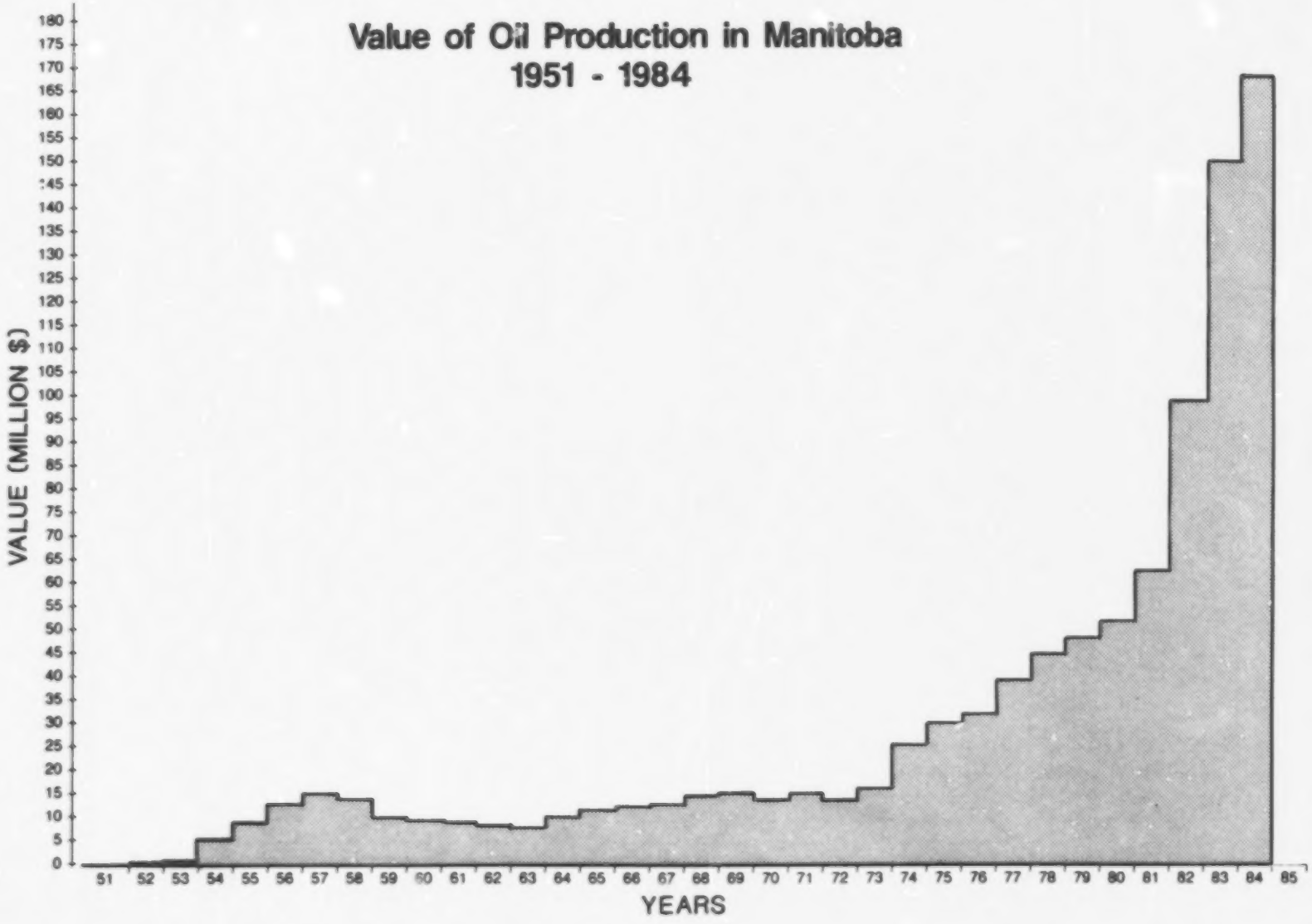



Average Manitoba Crude Oil Prices
1951 - 1984
PRICE ($/m³)
PRICE ($/bbl)
YEARS
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85

Value of Monthly Production
1982 - 1984



Value of Oil Production in Manitoba
1951 - 1984

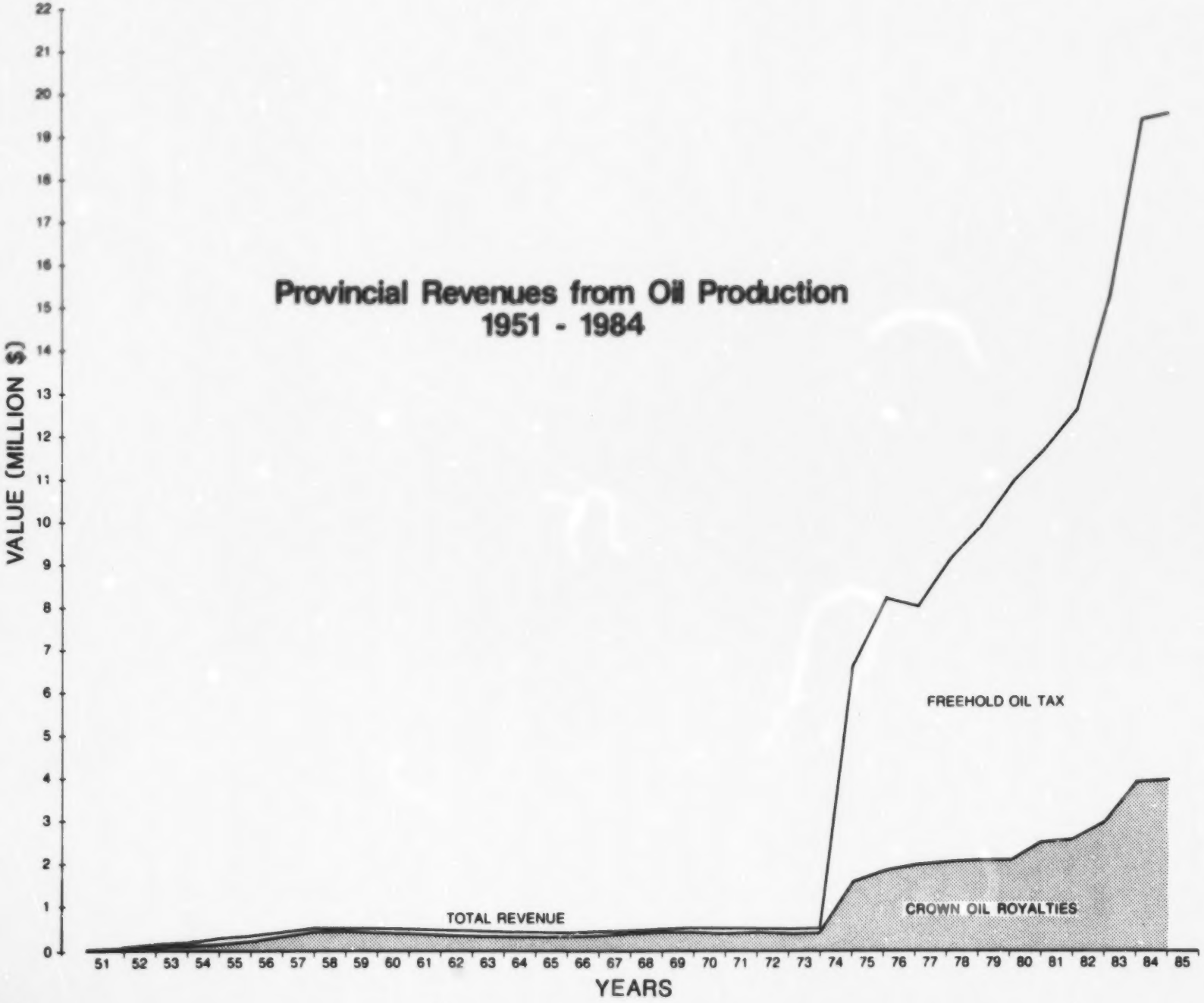


PROVINCIAL REVENUES FROM OIL EXPLORATION AND DEVELOPMENT IN MANITOBA*

1951-1984

YEAR	CROWN ROYALTIES	FREEHOLD OIL TAX ($)**	CROWN LEASE*** RENTAL ($)	CROWN LAND**** SALES ($)	MISCELLANEOUS FEES ($)	TOTAL PROVINCIAL* REVENUES ($)
1951	2,000	-	4,000	-	5,000	11,000
1952	7,000	-	7,000	-	9,000	23,000
1953	50,000	46,000	6,000	-	8,000	110,000
1954	156,000	64,000	18,000	88,000	24,000	350,000
1955	230,000	92,000	69,000	627,000	10,000	1,028,000
1956	318,000	83,000	512,000	156,000	18,000	1,087,000
1957	382,000	126,000	421,000	110,000	-	1,039,000
1958	356,000	137,000	293,000	-	31,000	817,000
1959	344,000	165,000	201,000	14,000	2,000	726,000
1960	313,000	130,000	98,000	4,000	2,000	547,000
1961	306,000	105,000	93,000	135,000	5,000	644,000
1962	298,000	96,000	90,000	26,000	10,000	520,000
1963	276,000	91,000	47,000	40,000	3,000	457,000
1964	307,000	86,000	35,000	122,000	23,000	573,000
1965	344,000	84,000	62,000	102,000	3,000	595,000
1966	353,000	96,000	60,000	94,000	3,000	606,000
1967	370,000	111,000	56,000	83,000	10,000	630,000
1968	411,000	116,000	39,000	60,000	14,000	640,000
1969	405,000	128,000	31,000	84,000	4,000	652,000
1970	377,000	143,000	28,000	15,000	1,000	564,000
1971	373,000	143,000	21,000	34,000	2,000	573,000
1972	348,000	138,000	16,000	-	1,000	503,000
1973	404,000	144,000	15,000	-	2,000	565,000
1974	1,599,000	5,216,000	15,000	-	4,000	6,834,000
1975	1,823,000	6,498,000	12,000	-	1,000	8,334,000
1976	2,024,000	6,128,000	11,000	-	11,000	8,174,000
1977	2,263,000	7,012,000	10,000	-	3,000	9,288,000
1978	2,281,000	8,018,000	10,000	-	6,000	10,315,000
1979	2,280,000	8,769,000	44,000	944,000	12,000	12,049,000
1980	2,575,000	9,159,000	128,000	1,884,000	11,000	13,757,000
1981	2,715,000	10,005,000	186,000	1,692,000	12,000	14,610,000
1982	3,176,000	12,194,000	231,000	1,058,000	28,000	16,687,000
1983	4,135,000	14,825,000	270,000	1,076,000	59,000	20,365,000
1984	3,972,000	(15,640,000)	275,000	2,187,000	68,000	22,142,000
TOTAL	35,572,000	105,788,000	3,415,000	10,635,000	405,000	155,815,000

* Does not include corporate capital tax, sales tax, corporate and individual income tax or oil export tax.
** Administered under The Oil and Natural Gas Tax Act, Cap.035.
*** Includes only Rental Fees.
**** Includes Bonus and Application Fees.
Estimate ( )


Provincial Revenues from Oil Production
1951 - 1984
VALUE (MILLION $)
YEARS
FREEHOLD OIL TAX
CROWN OIL ROYALTIES
TOTAL REVENUE
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85

Municipal Tax Assessments

Oil producers in Manitoba pay a municipal tax on wells and associated production facilities, including: oil wells, batteries, salt water disposal wells, salt water disposal plants, water injection wells, and suspended wells.

The municipal tax assessment on these facilities for the period from September 1983 to September 1984 was approximately $6.07 million dollars, an increase of 28% over the previous year.

In addition, municipal taxes on flowline and pipeline facilities have been assessed at approximately $500,000.

Surface Owners

Companies wishing to explore or develop oil properties in Manitoba must negotiate a surface lease with the individual landowner. In return for this right-of-entry, the landowner receives a negotiated cash settlement which includes a first-year bonus payment and a subsequent annual rental fee for the duration of the lease.

Where the landowner is renting his land to another party, the oil company seeking right-of-entry must obtain the consent of both the landowner and the occupant.

After a lease has been signed, the landowner and occupant then determine what each will receive as his share of the compensation paid by the oil company.

Following proclamation of The Surface Rights Act on August 9, 1984, disputes relating to right-of-entry are now referred to a three-member Surface Rights Board appointed by the Minister of Energy and Mines. The Board's principal function is to arbitrate disputes between the petroleum industry and landowners regarding use of land for exploration, development and related operations and to determine what compensation should be paid to the landowner. The Board's office is located in Virden.

In 1984, an estimated $2.6 million was paid by oil companies to landowners in the form of first-year bonuses ($1.0 million) and annual rental fees ($1.6 million).

Oil Price Supplement Programs

New Oil Reference Price (NORP) Program:

The NORP program became effective on January 1, 1982, and continued during 1984. As New Oil production levels increased, the total value of NORP supplements also increased. This program was introduced and implemented in Manitoba as a result of oil pricing and taxation negotiations between the Governments of Manitoba and Canada in December 1981.

The NORP program works in the following manner: Operators producing "conventional new oil" sell their production at "old" oil prices to purchasers and later receive a NORP supplement funded by the Government of Canada. The NORP supplement, together with the price for "old" oil, makes the amount received for NORP production equal to the world oil price.

The Petroleum Branch of the Manitoba Department of Energy and Mines administers the NORP program in Manitoba.

As of December 31, 1984, 502 wells were eligible for NORP supplements, an increase of 72% over the 292 wells eligible in December, 1983. In 1984 NORP supplements amounted to $23.5 million or 14% of the total value of provincial oil production. Compared with 1983, the value of NORP supplements increased by 31% in 1984.

Special Old Oil Price (SOOP) Program:

The SOOP program continued to operate until July 1984 at which time all wells qualifying for SOOP supplements became eligible to receive SOOP supplements equal in value to NORP supplements. This came about as the result of amendments to pricing agreements between the Federal Government and producing provinces, effective July 1, 1984.

As of December 31, 1984, production from 26 wells was eligible to receive the Special Old Oil Price. During 1984 a total of $688,500 was paid out in SOOP supplements, an increase of 180% over 1983.

Since inception in January, 1982 a total of $54.04 million has been paid to Manitoba producers under the NORP and SOOP supplement programs.

MANITOBA NEW OIL REFERENCE PRICE (NORP) PROGRAM - 1984

SUMMARY

MONTH	NO. OF COMPANIES CLAIMING	NUMBER OF WELLS CLAIMED	TOTAL NORP PRODUCTION CLAIMED (m^3)	TOTAL NORP SUPPLEMENT CLAIMED ($)	TOTAL VALUE OF PRODUCTION* ($)
January	20	340	32 899	1,812,291	14,301,023
February	21	349	27 014	1,507,027	13,149,896
March	22	364	30 436	1,698,070	14,005,536
April	21	354	26 929	1,631,863	12,550,374
May	24	364	25 810	1,598,813	13,261,611
June	22	367	27 561	1,827,451	13,339,457
July	21	387	30 246	2,044,424	14,435,205
August	23	411	32 298	2,315,786	14,681,641
September	22	421	32 036	2,201,540	15,340,543
October	26	426	35 740	2,506,096	14,848,599
November	28	424	32 582	2,249,695	14,671,837
December	25	502	31 629	2,102,301	14,710,231
TOTAL:	N/A	N/A	365 180	23,495,357	169,296,153

* Includes SOOP and NORP supplements

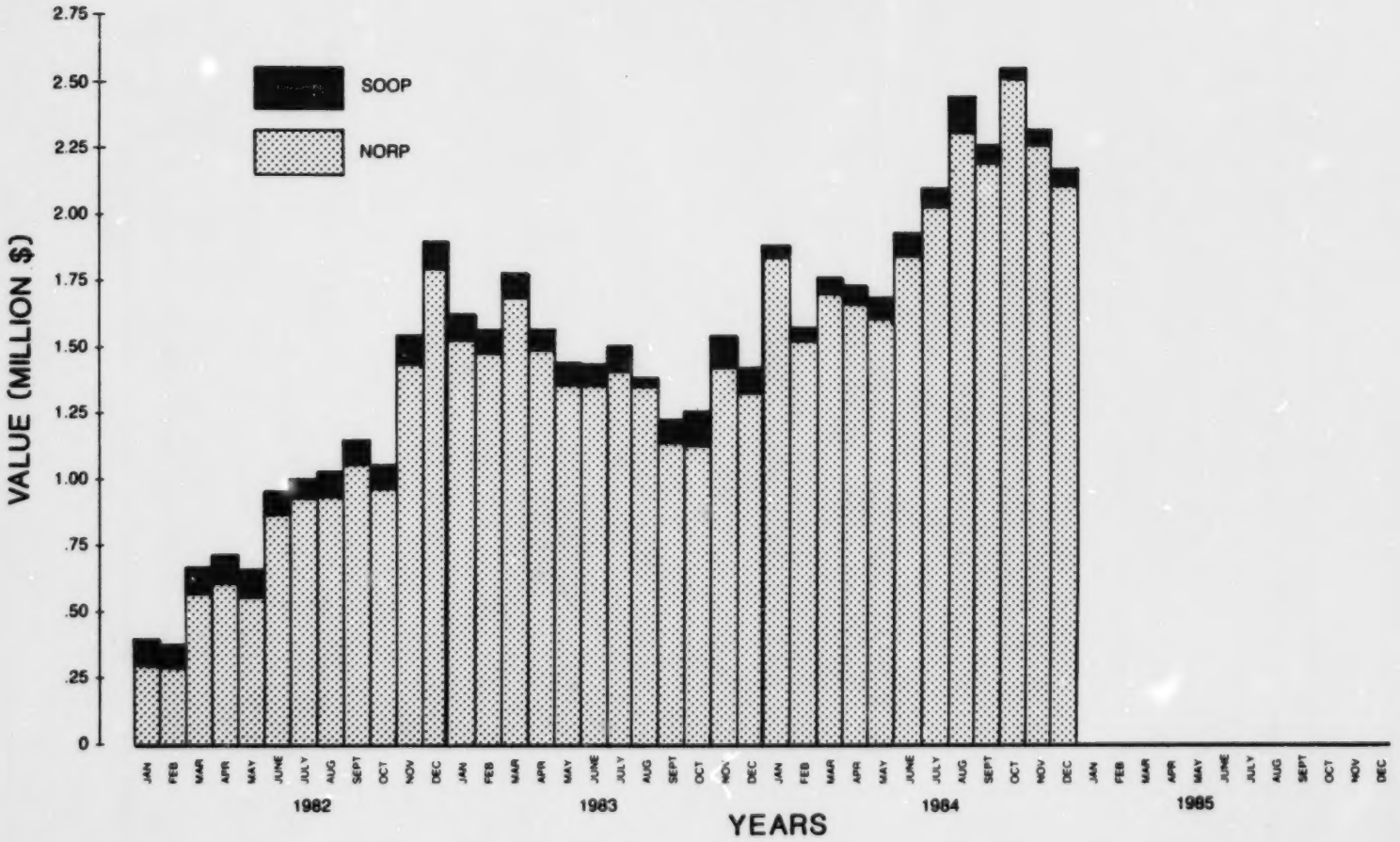
MANITOBA SPECIAL OIL OIL PRICE (SOOP) PROGRAM - 1984

SUMMARY

MONTH	NO. OF COMPANIES CLAIMING	NO. OF WELLS CLAIMED	SOOP PRODUCTION CLAIMED (m^3)	SOOP SUPPLEMENT CLAIMED ($)
January	8	25	956	48,277
February	8	26	878	45,815
March	9	27	944	49,124
April	8	27	1 120	65,679
May	10	30	1 158	68,005
June	8	28	1 061	68,590
July*	9	28	891	57,570
August	9	28	943	65,869
September	8	26	783	51,733
October	9	26	930	62,305
November	8	25	854	57,769
December	9	26	745	47,785
TOTAL:	N/A	N/A	11 263	688,521

* As of July, 1983 value of SOOP supplement equivalent to value of NORP supplement.

Value of Manitoba New Oil Reference Price (NORP) and Special Old Oil Price (SOOP) Supplement Programs 1982 - 1984



Manitoba Drilling Incentive Program

The "Manitoba Drilling Incentive Program" provides for reduced Crown oil royalty and freehold oil tax rates on oil produced from new wells. Wells drilled between January 1, 1979 and January 1, 1987, and producing from Crown mineral rights may qualify for a special reduced royalty incentive rate which is 35% of the corresponding base royalty rate charged on "old oil".

New wells producing from freehold mineral rights are eligible for a corresponding incentive freehold oil tax rate under The Oil and Natural Gas Tax Act.

The reduced royalty and tax rates apply to production from a new oil well during its respective incentive period.

The incentive period earned for wells producing from provincial Crown mineral rights is called the "royalty incentive period" (RIP) whereas wells producing from freehold mineral rights earn a "production incentive period" (PIP).

In 1984 approximately 47% of the 1350 wells capable of producing oil in the Province were operating under an incentive period (11% under RIP and 89% under PIP). Sixty-two per cent of the 629 incentive wells in the province are located in the Waskada area.

It is estimated that since the program was implemented in 1979, the value of the incentive to industry has been in excess of $7.5 million.

The Manitoba Drilling Incentive program has been instrumental in attracting oil companies to Manitoba over the

past six years. The extension of the program to include wells drilled up to January 1, 1987, keeps Manitoba's royalty and tax rates competitive with those in other oil producing provinces.

Oil Reserves

From 1973 to 1980, remaining established oil reserves in Manitoba declined at a rate of approximately 5% per year due to production and lack of new discoveries.

This trend began to reverse in 1980 as new discoveries were made in the Kirkella area. New discoveries in the Waskada area in 1981 further arrested the decline and as a result of additional development in the area in 1982 and 1983 reserves increased. This increase in the Province's remaining established reserves followed more than 16 years of decline.

As of December 31, 1984, the province's total remaining established crude oil reserves were estimated to be 8.02 million m^3 (50 million barrels) down 1.6% from 1983.

1985 Forecast

Manitoba may see a slight decrease in the level of exploration and development activity during 1985. The major reason being that with the Waskada area nearing full development, fewer development wells are expected to be drilled. Recent interest and activity in the west Daly area may have an offsetting effect.

The following reasons will continue to be instrumental in maintaining industry's interest in Manitoba:

CRUDE OIL RESERVES IN MANITOBA

1973-1984

YEAR	PRODUCTION (m^3)	ESTABLISHED RESERVE ADDITIONS (m^3)	REMAINING ESTABLISHED RESERVES (m^3)	YEARS TO DEPLETION*
1973	807 882	Nil	11 798 000	14.60
1974	754 667	15 000	11 059 000	14.65
1975	701 459	4 000	10 362 000	14.77
1976	633 322	7 000	9 735 000	15.37
1977	630 466	15 000	9 120 000	14.46
1978	598 354	22 000	8 543 000	14.28
1979	583 377	24 000	7 984 000	13.64
1980	563 482	314 000	7 735 000	13.73
1981	542 695	544 000	7 736 000	14.25
1982	582 322	733 000	7 927 000	13.60
1983	736 934	954 000	8 154 000	11.06
1984	793 284	663 000	8 024 000	10.11

* Remaining Established Reserves ÷ Annual Production

- the continuation of the Manitoba Drilling Incentive Program to the end of 1986 will provide oil producers with netbacks competitive with other oil producing provinces;

- discoveries in Manitoba are likely to be oil rather than less marketable natural gas and will receive the equivalent of world oil prices;

- the significant amount of geophysical activity in 1984 could spark new or renewed interest in several areas of the province; and

- expiring leases will either prompt drilling or free up additional lands for other interested developers.

Because of these factors, it is estimated that over 200 wells will be drilled during 1985, and of this number, it is possible that 150 new oil wells will be placed on production.

With more wells on production, an increase in total oil production is also forecast. Approximately 825 000 m^3 of oil (5.2 million barrels) could be produced in Manitoba this year, resulting in a 4% increase over 1984 production.

Although "old" oil production will continue to decline through 1985, the amount of NORP oil production is expected to steadily increase from 47% of total production in December 1984 to about 55% of total production in December 1985.

As production levels increase so will the value of oil sales. In 1985, the value of oil could exceed $180 million

representing a 7% increase over 1984. Concurrently, Crown oil royalties should approach $4.5 million in 1985 while freehold oil taxes could generate approximately $16.0 million.

With development of the Waskada area nearing completion and with drilling activity expected to decline, the province's established oil reserves may again decline unless another significant discovery is made.

Other areas that may see increased geophysical and drilling activity include the Oak Lake, St. Lazare, Daly, Souris-Hartney, Tilston, and Pierson areas. Several oil and gas companies have become interested and active in these areas.

MANITOBA OIL FIELDS - 1984

	DALY	TILSTON	WASKADA	COULTER	LULU LAKE	VIRDEN	WHITE-WATER	PIERSON	W. BUTLER	KIRKELLA	S. PIERSON	SOURIS RANTWEY	OTHER AREAS	TOTAL
DISCOVERY YEAR	1951	1952	1952	1952	1953	1953	1953	1954	1955	1957	1961	1962	N/A	N/A
AVG. DEPTH TO PRODUCING FORMATION (m)	769	945	923	970	1 000	630	785	1 003	840	738	990	655	N/A	N/A
PRODUCING FORMATION	L	MC	MC/LAm	MC/LAm	L	L	L	MC	L	L	MC/LAm	L	LAm/MC/L	N/A
WELL SPACING (ha)	16	16	16	16	16	16	16	16	16	16	16	32	16	N/A
OIL QUALITY	D38 4	D38 3	D28 3 D38 3	D38 3	D38 3	D38 4	D38 3 D38 4	D28 3 D38 4	D38 4	D5 8 6	D28 3 D38 3		D48 4	N/A
WELLS CAPABLE OF OIL PRODUCTION (DEC. 1984)	222	26	352	9	5	583	15	50	3	38	12	8	27	1 350
OIL WELLS PRODUCING (DEC. 1984)	185	21	314	1	3	550	15	43	3	36	10	7	21	1 209
1984 OIL PRODUCTION (m^3)	88 782	10 988	270 156	758	1 767	356 897	14 271	19 423	502	12 435	5 796	2 788	8 722	793 285
CUMULATIVE OIL PRODUCTION (DEC. 31/84) (m^3)	3 653 448	89 127	727 920	6 860	37 324	17 897 590	94 367	282 592	30 413	206 649	17 426	127 798	33 159	23 204 620
REMAINING ESTABLISHED RESERVES (m^3) (DEC. 31/1984)	913 990	24 720	1 709 350	600	6 120	5 017 130	19 830	212 450	3 880	35 660	11 570	35 590	33 570	8 024 360

L - Lodgepole
LAm - Lower Amaranth
MC - Mission Canyon